

Issue 5, May 2000

FIC becomes the New MIM Secretariat

Welcome to the first MIM newsletter published by the Fogarty International Center (FIC). We are delighted to pick up where the Wellcome Trust left off, providing the latest MIM news and keeping channels of communication open.

The U.S. National Institutes of Health (NIH) was asked to take over the Secretariat function of the MIM a year ago at the Second International MIM Conference, in Durban, South Africa. At that time, Dr. Harold Varmus asked FIC to take the lead on behalf of the NIH. Although FIC is responsible for running the MIM Secretariat, the basic operating budget for staff and communications is supported equally by FIC and NIH's National Institute of Allergy and Infectious Diseases (NIAID). Together, we have started building on the work begun by the Wellcome Trust and will continue to address and coordinate scientific research efforts to reduce the burden of malaria in endemic countries. Our goal is to promote capacity building and to facilitate global collaboration and coordination to ensure that research findings yield practical health benefits. It has been an eventful year and there is significant progress to report.

MIM Secretariat Staff

- Dr. Gerald Keusch, FIC Director and NIH Associate Director for International Research, is the lead for the MIM Secretariat.
- Dr. Andrea Egan, is the MIM Secretariat Coordinator. Dr. Egan is a British scientist whose background is in malaria vaccine research. She also brings to the position the experience of having worked in Africa and skills in scientific administration.
- Dr. Joel Breman, Deputy Director of the Division of International Training and Research at FIC serves as Senior Scientific Advisor to the MIM Secretariat. Dr. Breman has extensive prior experience in malaria epidemiology research in Africa.
- Dr. Barbara Sina, Program Officer for Malaria Activities in the Division of International Training and Research at the FIC, serves as Scientific Advisor to the MIM Secretariat. Dr. Sina has research expertise in vivax malaria, vector biology and malaria vaccine development.
- Dr. Martin Alilio will join the Secretariat in July. Dr. Alilio is from Tanzania and is a malariologist with training in the social sciences. He will work with us on all aspects of the MIM, including preparations for the next MIM conference, which is being planned for Tanzania in 2002.

A global collaborative effort against malaria in Africa

The Multilateral Initiative on Malaria (MIM) is an alliance of organizations and individuals concerned with malaria. It aims to maximize the impact of scientific research against Malaria in Africa, through promoting capacity building and facilitating global collaboration and coordination.

Published by the Fogarty International Center

New MIM Web Site

Visit the new MIM web site at: http://mim.nih.gov for the latest MIM-related information – in French and English. The site includes a "discussion forum" where you can share your ideas with us. We urge you to take part. In addition, we will be pleased to include your contributions of news and information for the web site and/or the newsletter. You may send these by e-mail to mim@nih.gov or by fax to 1-301-402-2056. Previous information about the MIM remains on the Wellcome Trust web site at: http://wellcome.ac.uk/mim

First Meeting under the New MIM Secretariat

The first MIM meeting at the FIC was held on December 2, 1999 at the NIH. Eighty representatives from 20 countries (including 10 African countries) attended the meeting entitled 'Refocusing the Dakar Recommendations for the 21st Century: Developing an Action Plan for 2000-2003'. The meeting involved discussions on the progress of ongoing MIM activities as well as potential for partnerships between MIM and other malaria research capacity strengthening programs. The group affirmed that the focus of the Secretariat is to support the African malaria research community and to facilitate identifying priority research areas that focus on the needs of control programs. The consensus was that MIM has already accomplished a great deal in its first few years, yet much more remains to be done. Three breakout groups considered proposals regarding the operation and functions of the Secretariat, new scientific challenges for malaria research, and further development of malaria research training, communications and capacity building in endemic countries. A number of proposals from African as well as northern partners were presented and discussed to determine priorities for support. A common theme underlying all of the proposals was the urgent need for sustainable partnership and multidisciplinary collaboration in order to address malaria research needs and facilitate capacity building in laboratories located in developing countries.

In order to elicit as much comment as possible from the African malaria research community and collaborating investigators from the north, the proposals were posted on the MIM web site. Copies were also sent by fax to those on the MIM mailing list without e-mail connections. FIC partners and organizations have recently received the current MIM Action Plan based on these proposals for their consideration for financial support. A full report of the first meeting of the FIC MIM Secretariat is available in English and French at the MIM web site in the events section.

MIM/TDR - People and Events

Research Program Meeting 2 September 1999,

Bethesda, Maryland, USA

The initial meeting of the MIM/TDR (Special Programme for Research and Training in Tropical Diseases at the WHO) research program focused on future support by the four major sustaining partners (NIAID, WHO/TDR, the Rockefeller Foundation, and the World Bank). Professor Ayo Odoula, then the Chair of the MIM/TDR Task Force, spoke about the accomplishments of the program and its significance for the African malaria research community. The sponsors were impressed with the progress and will continue to provide support the program for an additional 2 years.

Progress Report on Research Capability Strengthening in Africa by MIM/TDR

The MIM/TDR Task Force for Malaria Research Capability Strengthening in Africa has been a critical component of the MIM efforts. On behalf of the MIM partners, it works to develop and strengthen core African research groups, promote technology transfer and local training through research involving collaboration between African and non-African groups. Twenty multi-center research projects led by African principal investigators have been funded. The grants have also provided scholarships for 17 Ph.D. and 11 M.Sc. students. Selection of successful grant applications for funding was based on submission of a collaborative project involving an established African research institution, a developing/emerging African research institution and a non-African institution. Additional criteria were capacity building potential and scientific quality. Budgets of these grants range from US\$92,000 to US\$250,000 per year.

The first meeting of the 20 MIM investigators took place between 6-8 March 2000 in Ouagadougou, Burkina Faso. Each principal investigator gave a brief presentation on their project and progress to date. The presentations facilitated assessment of current status of the development of each project and review of funding. The investigators' meeting was followed by the MIM/TDR Task Force meeting (9-12 March). Current initial three year funding by the Task Force will receive more detailed evaluation in the next MIM/TDR Task Force meeting scheduled for Harare, Zimbabwe in March 2001.

A list of current MIM/TDR grantees is available on the MIM web site or from:

Dr. Fabio Zicker, MIM/TDR Task Force Manager, TDR, WHO, 20 Avenue Appia, 1211 Geneva 27, Switzerland.

Fax: 41-22-791-4854 E-mail: zickerf@who.ch

Changes in the Membership of the MIM/TDR Task Force

Dr. Odile Puijalon (Institute Pasteur, Paris) has left the MIM/TDR Task Force. Dr. Didier Fontenile (Organization de lutte Contre les Endemies en Afrique Centrale [OCEAC], Yaounde, Cameroon) was coopted to serve for one year on the Task Force. Professor Oduola stepped down from his position as the Task Force Chairperson subsequent to accepting a position with the WHO/TDR in Geneva. He continues to serve as point of contact for the MIM/TDR Task Force Secretariat at TDR with Dr. Fabio Zicker. Dr. Fred Binka (Navrongo Health Research Center, Ghana) is the new Task Force Chairperson. Until recently, Dr. Binka was at Roll Back Malaria, WHO, Geneva.

Current members of the Task Force:

- Dr. Fred Binka, Navrongo Health Research Center, Ghana (Task Force Chairperson)
- Professor Masamichi Aikawa, Tokai University, Kanagawa, Japan
- Professor Mario Coluzzi, Universita di Roma "La Sapienza", Italy
- Professor Ogobara Doumbo, Université du Mali, Bamako, Mali
- Dr. Didier Fontenille, OCEAC, Yaoundé, Cameroon
- Dr. Brian Greenwood, London School of Hygiene and Tropical Medicine, UK
- Dr. Louis Miller, National Institutes of Health, Bethesda, MD, USA
- Dr. Halima Abdullah Mwenesi, Kenya Medical Research Institute, Nairobi, Kenya
- Dr. Thomas Sukwa, Tropical Diseases Research Centre, Ndola, Zambia
- Dr. Marita Troye-Blomberg, Stockholm University, Sweden

Current members of the MIM/TDR Task Force Secretariat:

- Dr. Fabio Zicker, Task Force Manager, TDR/Research Capability Strengthening, WHO, Geneva
- Dr. Oladapo Walker, WHO Regional Office for Africa, Harare, Zimbabwe
- Professor Ayoade M.J. Oduola, TDR/Research Capability Strengthening, WHO, Geneva
- Dr. Stephanie James, National Institutes of Health, Bethesda, MD, USA

Inventory of the Current Infrastructure and Malaria Research Capacity in Africa

The Wellcome Trust recently published an inventory, which it developed while acting as the MIM Secretariat, of the current infrastructure and malaria research capacity in Africa. This represents a first step towards identifying requirements for training and further development of human and infrastructure resources in Africa. The full report titled "Strengthening Health Research in the Developing World; Malaria Research Capacity in Africa" is available in English with a short summary in English and French at:

http://www.wellcome.ac.uk/en/1/biosfgintcrpmimrep.html. This unique study highlights the need for a more concerted coordinated approach by international funding organizations and governments to strengthen the science research bases of developing countries as a vehicle for effective responses to local health problems.

Update on MIM Activities

Enhanced Internet Connectivity – an update from the National Library of Medicine (NLM)

MIM has engaged the NLM to lead the MIM connectivity group to enhance electronic communication facilities at major research sites in Africa. The following from Ms. Julia Royall of the NLM is an update of the substantial progress:

- A VSAT (very small aperture terminal) system is being used to connect research sites in Mali, Kenya and Ghana to the Internet via satellite. These sites were chosen based on the high quality of their current malaria research programs.
- In Mali a local area network was installed at the Malaria Research and Training Center with support from the NIH and the World Bank. The NLM is currently working with the Mali Ministry of Health to assist in using World Bank funds for development of the medical school library as a resource for the country and the region.
- The Centers for Disease Control and Prevention/Kenya Medical Research Institute (CDC/KEMRI) site in Kisian and the Wellcome Trust/KEMRI site in Kilifi, were installed in July 1999 with support from the NIH, CDC, and the Wellcome Trust.
- The Noguchi Memorial Institute and the Navrongo Health Research Center sites in Ghana were connected in December 1999 to support malaria vaccine testing by scientists at these sites in collaboration with NIAID/NIH, US Agency for International Development (USAID) and the US Naval Medical Research Center (NMRI).
- In March 2000 the NLM installed another VSAT dish in Nairobi. Supported by the Walter Reed Army Institute of Research (WRAIR), this dish will also serve KEMRI, CDC, and the US Library of Congress office which serves the Africa region.
- Shortly, the Tanzanian National Institute of Medical Research (NIMR) headquarters' link in Dar es Salaam will be upgraded. Later this summer, the NLM plans to install VSAT stations at the Ifakara and Amani research sites in Tanzania.
- A web site has been created by the NLM as a resource for researchers using the MIM network in Africa: http://www.mimcom.net It is anticipated that researchers at the connected sites will set up their own web pages linked to the MIM web site to better communicate the nature and results of their work.
- Proposed future installations include sites in Cameroon,
 Nigeria, Malawi, Uganda and Burkina Faso when funding partners are identified.

For additional information please contact:

Ms. Julia Royall, NLM, NIH, 8600 Rockville Pike, Bethesda, MD 20894, USA.

Fax: 1-301-496-4450 E-mail: jroyall@nlm.nih.gov

Enhanced Capability for Multi-Site Studies an update from the MR4

NIH's NIAID in collaboration with MIM, has established a Malaria Research and Reference Reagent Resource Center (MR4) to provide standardized and well characterized malaria research reagents. MR4 provides these reagents to the global malaria research community for just the cost of shipping. These reagents are an invaluable resource for development of comparable multi-center studies. MR4 will also provide workshops, training programs and technical support to African scientists. Additional information, including on-line registration materials, is available at the MR4 web site:

http://www.malaria.mr4.org/mr4pages/index.html
Dr. Alexandra Fairfield (NIAID) reports on MR4 progress:

- In support of MIM/TDR projects, the MR4 staff worked with several scientists to produce Polymerase Chain Reaction (PCR) primers for drug resistance and parasite genotyping based on recent reports in the literature. These primers were used for a training workshop sponsored by NIAID and MIM/TDR in Bamako, Mali, January 2000. The workshop sponsors are grateful for the hard work and dedication of the workshop facilitators from Mali, the US and the UK, as well as for the generous hospitality and support from the Bamako Medical Center. The Sponsors hope that the PCR analysis of parasite DNA, as well as subsequent correlation with in vitro drug susceptibility and clinical outcome of treatment in the patient, will be a successful demonstration of multiple agency cooperation under MIM.
- A workshop on "Handling and Managing Biological Materials" was organized by the MR4 in Ouagadougou, Burkina Faso, 2-4 March 2000. The workshop was sponsored by NIAID in cooperation with the MIM/TDR Task Force and the Centre National de Lutte contre le Paludisme (CNLP) in Ouagadougou. Participants at the workshop included those new to malaria research and those gearing up for new, collaborative and coordinated malaria research projects. Twenty-nine investigators from 12 African countries participated in the workshop. The enthusiasm and active participation of the scientists contributed to the success of the workshop. Feedback at the end of the workshop indicated that participants benefited from the training activity and acquired new knowledge on biosafety and ethical issues of reagent collection, handling and storage. The MR4 facilitators are indebted to the CNLP for excellent hospitality. Additional copies of the workshop manual will hopefully be made available later this year for general distribution.
- Lastly, the MR4 organized a symposium on the "Role of Biological Resource Centers in Africa" during the first day of the MIM/TDR meeting in Ouagadougou, 6 March 2000. The symposium was organized in response to a MIM/TDR Task Force request to the MR4 Scientific Advisory Committee as a follow up on discussions in this area initiated at the MIM conference in Dakar in 1997.

For additional information please contact:

Dr. Alexander Fairfield, DMID, NIAID, NIH, 6700B Rockledge Drive, Bethesda, MD 20892, USA. Fax: 1-301-402-0659. E-mail: afairfield@mercury.niaid.nih.gov

MIM and Roll Back Malaria (RBM)

RBM is a WHO initiative that aims to reduce the number of malaria fatalities by 50% in 2010 through better use of currently available control tools. MIM is committed to working closely with RBM to promote and support research activities to develop new tools to effectively control malaria. Consequently, although RBM and MIM are separate initiatives, both are complimentary activities working towards a common goal - the reduction of the burden of malaria. MIM will focus on scientific research to control malaria in endemic countries through promotion of capacity building and facilitating global collaboration to ensure that research findings yield practical health benefits. MIM activities will enhance use of research findings in malaria control programs.

MIM's director Dr. Gerald Keusch, attended the "Third Meeting of the Global Partnership to Roll Back Malaria" held at the WHO in Geneva, 2-3 February 2000. Dr. Keusch chaired the working group session on "Guidance on key areas of technical support" and made recommendations for partnership support systems that can help build human and institutional capacity. A consensus was reached that RBM should effectively utilize the research network in place within TDR, TDR/MIM and MIM, to create more effective malaria control tools.

Meeting/Workshop Reports:

Malaria Transmission Blocking Vaccine Meeting, 3-5 December 1999, Bethesda MD, USA

An international group of experts, including scientists, representatives from industry, some major funding agencies and the WHO, met to address the issue of developing a malaria transmission blocking vaccine. The meeting was funded by the WHO (TDR and RBM), the Bill and Melinda Gates Foundation and the NIH (NIAID and FIC). A report of the meeting, including recommendations for the next step to be taken, has been produced in English and is available on the MIM web site under events.

Research Initiative on Traditional Anti-Malarials (RITAM), Inaugural meeting, 8-11 December 1999, Moshi, Tanzania RITAM is a global collaboration between the WHO, the Global Initiative for Traditional Systems of Health, University of Oxford, researchers and other investigators interested in the antimalarial properties of plants. The initiative was launched in 1999 with a view to developing or validating local herbal medicines for prevention and/or treatment of malaria. RITAM held its first international meeting in collaboration with the WHO to discuss appropriate research targets and methods on herbal antimalarials. A report of the conference in English is available on the MIM web site under partnerships. More information on RITAM is available on the web at:

http://users.ox.ac.uk/%7Egree0179/giftsmalaria.html

Seminar on Health Research Ethics in Africa, I-4 November 1999, Arusha, Tanzania

The African Malaria Vaccine Testing Network (AMVTN) Secretariat is exploring ways of creating awareness and strengthening institutional ethics review processes. The report of the seminar is published in the April 2000 issue of Parasitology Today. The Arusha Ethics Seminar also mandated the AMVTN to assist developing a Pan Africa Bioethics Network. A brief report from the AMVTN's most recent Good Clinical Practice Workshop (28 February – 1 March 2000, Bagamoyo, Tanzania) will appear in the next AMVTN newsletter. For previous newsletters and more information on the AMVTN see their web site at: http://www.amvtn.org

MIM Sponsored travel of scientists from malaria endemic countries

The MIM Secretariat will endeavor to provide travel support to enable malaria research scientists from endemic countries to attend important MIM-related meetings. However, funds available for this purpose are very limited and efforts are being made to engage additional partners to support scientific travel. A list of beneficiaries of the travel support is provided below.

Meeting of the MIM at the FIC, 2 December 1999, Bethesda, MD, USA

- Dr. James Hakim, Department of Medicine, University of Zimbabwe.
- Prof. Wenceslaus Kilama, Tanzanian Commission for Science and Technology, Dar es Salaam, Tanzania.
- Dr. Rose Leke, University of Yaounde, Cameroon.
- Dr. Mwele Malecela, National Institute for Medical Research, Dar es Salaam, Tanzania.
- Dr. Halima Mwenesi, Kenya Medical Research Institute, Nairobi, Kenya.
- Prof. Ayoade Oduola, Postgraduate Institute for Medical Research and Training, College of Medicine, University of Ibadan, Nigeria.
- Dr. Brian Sharp, National Malaria Research Programme, Medical Research Council, Durban, South Africa.

Fourth International Conference of the Federation of African Immunological Societies (FAIS),

14-18 February 2000, Yaounde, Cameroon

 Dr. Aiah Gbakima, Department of Biology, Morgan State University, Baltimore, MD, USA.

Workshop on the Pathogenesis of Malarial Anemia 11-12 May 2000, Bethesda, MD, USA

- Dr. Sornchai Looareesuwan, Mahidol University, Bangkok, Thailand.
- Dr. Bartholomew Akanmori, Noguchi Memorial Institute for Medical Research, Ghana-a MIM/TDR grantee, will be supported to attend this meeting by NIAID.

Items of Interest

Science Controversies On-line: Partnerships in Education (SCOPE)

SCOPE is a collaboration between the University of California-Berkeley, the University of Washington and the journal Science, with funding provided by the National Science Foundation. SCOPE provides access to exclusive commentaries and cutting-edge updates, selected by the editors of Science, about important research and policy topics related to malaria. The Forum also provides tools and resources to promote discussion, collaboration, and learning among its members. Check out this very useful web site at:

http://scope.educ.washington.edu/welcome/malaria/

Environmental Health Project (EHP) information network provides abstracts of the latest publications in malaria

The EHP, established by USAID, produces a bulletin of abstracts of all articles on malaria published in the previous 2 weeks. Subscription to the e-mail distribution list is free (send an e-mail to Dan Campbell at CampbellDB@EHProject.org). These abstracts are also available on the EHP web site at: http://www.ehproject.org

Downloadable malaria maps of most African countries are available at the Mapping Malaria Risk in Africa/Atlas du Risque de la Malaria en Afrique (MARA/ARMA) web site Malaria maps of most African countries can be downloaded from the Mapping Malaria Risk in Africa/Atlas du Risqué de la Malaria en Afrique (MARA/ARMA) web site. MARA is a pan-African collaborative network established to collect, collate, validate and manage all available malaria data from Africa, and to map the distribution, intensity and seasonality of malaria on the continent. The primary objective is to support African control initiatives. MARA relies on empirical data collection and geographical modeling. More information can be found in the Technical Report (English and French) on the web at: http://www.mrc.ac.za/mara/

MARA/ARMA is a MIM/TDR supported project.

Comprehensive list of journals with free online access

Available at the Federation of African Immunological Societies
(FAIS) web site at: http://www.faisoc.org. Provided by Enid
Shepherd, University of Cape Town, South Africa.

Upcoming Events Workshops

Workshop on the Pathogenesis of Malarial Anemia, 11-12 May 2000, Bethesda, MD, USA Sponsored by NIH (NIAID, the National Heart, Lung and

Sponsored by NIH (NIAID, the National Heart, Lung an Blood Institute and FIC) and the MIM.

TDR advanced course on Immunology, Vaccinology and Biotechnology applied to infectious diseases: 13 September- 28 October 2000, Geneva, Switzerland

Contact: Dr J. A. Louis, Head, WHO Immunology Research and Training Center, TDR, WHO, 20 Avenue Appia CH-1211 Geneva 27, Switzerland. Fax: (41 22) 791 4774

E-mail: louisjae@who.ch Application deadline: 30 May 2000

Meetings and Conferences

The Internet and the Public's Health:

Impact on Individuals, Communities and the World, Harvard School of Public Health & Harvard Medical School, 30-31 May 2000, Cambridge, Massachusetts, USA

http://www.hsph.harvard.edu/health-internetconference

E-mail: deansoff@hsph.harvard.edu Telephone: 1-617-432-1026

XV International Congress for Tropical Medicine and Malaria, 20-25 August 2000, Cartagena de Indias, Colombia

http://wwwprof.uniandes.edu.co/~xviftm/cartagena.htm Contact: Professor Felipe Guhl, Universidad de los Andes, Centro de Investigaciones en Parasitología Tropical, Apartado Aereo 4976, Bogotá Colombia.

Fax: 57-1-2841890

E-mail: fguhl@uniandes.edu.co

Joint meeting of the Royal/American/Japanese Societies of Tropical Medicine and Hygiene,

18-22 September 2000, Oxford University, UK

http://www.oxford2000.org.uk

Contact: Congress Secretariat, CMC House, 19, King Edward

Street, Macclesfield, Cheshire, SK10 1AQ, UK.

Fax: +44 (0) 1625 624075 E-mail: ccs@cmc.co.uk Abstract deadline: 18 June 2000

International Conference on Health Research for Development, 10-13 October 2000, Bangkok, Thailand

http://www.conference2000.ch

Contact: Conference 2000 Secretariat, COHRED c/o UNDP, Palais des Nations, CH-1211 Geneva 10, Switzerland.

Fax: (41 22) 917 8015

E-mail: Conference2000@cohred.ch

International Clinical Epidemiology Network (INCLEN) Global Meeting XVII, "Research Networks in the New Millennium: Developing Countries' Contribution to Global Knowledge" 15-18 October 2000, Bangkok, Thailand

http://www.inclen.org

Contact: Mrs. Herminia Mekanandha, Clinical Epidemiology Unit, Faculty of Medicine, Chulalongkorn University, Room 212, 2nd Floor, Anandhamahidol Building, Rama IV Road, Bangkok 10330, Thailand.

Fax: (662) 254-193

E-mail: mhermini@chula.ac.th

Continuing Support for MIM and Malaria Research at the NIH

Dr. Harold Varmus left the NIH in December 1999 to take a leadership role at the Memorial Sloan-Kettering Cancer Center. We are pleased to note that he has stated his continued interest and support for malaria research and the MIM, and that Dr. Ruth Kirschstein, the Acting Director of the NIH, and Dr. Anthony Fauci, Director of NIAID, are fully behind the MIM efforts at the NIH.

In The Next Edition.....

We will have a comprehensive list of current training and funding opportunities for scientists in endemic regions. In the interim, these can be viewed on our web site. Also, readers should consult the very useful MIM review of training and funding opportunities in the MIM/Wellcome Trust report "Strengthening Health Research in the Developing World: Malaria Research Capacity in Africa". The report is available in English at: http://www.wellcome.ac.uk/en/1/biosfginttrpmimrep.html If you would like to receive a free copy of the report please contact: The Wellcome Trust Marketing Department, The Wellcome Building, 183 Euston Road, London NW1 2BE, UK. Fax: +44 (0) 20 7611 8545 E-mail: marketing@wellcome.ac.uk

Contact us:

And Finally

Dr. Andrea Egan, MIM Coordinator: Tel: 1-301-402-6680, E-mail: egana@mail.nih.gov Dr. Barbara Sina, Scientific Advisor:

means. We look forward to working with you!

The MIM is you, the scientists in the malaria-endemic countries

working in partnership with scientists in the north and the supporting

agencies, to reduce the global burden of malaria. We both welcome and

need your input and support. Please send us articles or items you think

should appear in the newsletter, and don't forget to join the discussion

forum in our web site. We look forward to reading your comments on

proposals being made for future MIM activities which are posted on the

web. If you do not have access to e-mail or the Internet, please send us a

fax or write to us, and we will keep you informed and involved by other

Tel: 1-301-402-9467, E-mail: sinab@mail.nih.gov Dr. Joel Breman, Senior Scientific Advisor: Tel: 1-301-496-1653, E-mail: jbreman@nih.gov

Multilateral Initiative on Malaria Fogarty International Center National Institutes of Health 31 Center Drive MSC 2220 Building 31, Room B2C39 Bethesda, MD 20892, USA Fax: 1-301-402-2056